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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,166

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Che-Chieh Wang

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08/16/2006

EXAMINER

LAMB, CHRISTOPHER RAY

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MERRIFIELD, VA 22116

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/605,166	<b>Applicant(s)</b> WANG ET AL.	
	<b>Examiner</b> Christopher R. Lamb	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claims 11-14, the first mapping function, second mapping function, and fifth mapping function claimed appear to correspond to the second mapping function, third mapping function, and first mapping function, respectively, of the specification.

Also, the “fifth control voltages” and “fifth test laser powers” appear to correspond to the first control voltages and first test powers of the specification.

The terminology of the claims should follow the nomenclature of the specification. When, for example, the specification refers to “a first mapping function” and the claims refer to *that same function* as “a fifth mapping function,” the meaning of the terminology in the claims is not clear from the descriptive portion of the specification.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8:

Claim 1, which this claim is dependent on, recites "first control signals" and "first test laser powers. Claim 8 recites "third control signals" and "third test laser powers." The claim is indefinite because the term "third" implies that there are second control signals and second test laser powers, but these are nowhere defined in the claim.

Regarding claims 9-10:

They are dependent on claim 8.

Regarding claims 11-12:

They contain language similar to claim 8: third but no second.

Regarding claim 13:

This is a similar problem: it refers to a "fifth mapping function," but no third or fourth mapping function has been defined. Also, it is dependent on claim 11.

Regarding claim 14:

It is dependent on claim 13.

5. Claim 8 recites the limitation "the second mapping function" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al. (US 5,732,055).

Regarding claim 1:

Masaki discloses:

A power control method for controlling a laser power used by an optical disk drive to record data on an optical disk (Fig. 31), the power control method comprising:

driving a pick-up head of the optical disk drive to sequentially output a plurality of first test laser powers according to a plurality of first control signals (Fig. 31: steps S1 and S3); and

establishing a first mapping function according to the first control signals and the first test laser powers (Fig. 31: step s5);

wherein a first predetermined laser power and a first predetermined control signal is obtained by using the first mapping function, and the first predetermined control signal is used for driving the pick-up head to output the first predetermined laser power (for example, Fig. 8: the coarse adjustment is used later for the fine adjustment used to set the zone power levels).

Regarding claim 2:

In Masaki a closed loop configuration is established when the pick-up head is driven to output the first test laser powers (column 26, line 9 through column 28, line 10:

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Fig. 31 is the process for adjusting for drift when the APC is enabled, which is a closed loop configuration).

Regarding claim 3:

In Masaki the first predetermined laser power is substantially a write power used by a CD-R drive for etching a recording layer of an optical disk (Fig. 31 is a write power emission adjustment process; the drive of Masaki is both a MO and CD drive: column 1, lines 1-30).

Regarding claim 7:

The method of Masaki further comprises a step of adjusting an amplifying gain adaptive to a current status of the pick-up head according to the first test powers (Fig. 31: step S5, S6: the relationship between current and power is used to adjust the gain of the system when setting a target power).

8. Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki (claims 1 and 7 have already been rejected once under Masaki but these rejections rely upon a different embodiment).

Regarding claim 1:

Masaki discloses:

A power control method for controlling a laser power used by an optical disk drive to record data on an optical disk, the power control method comprising:

driving a pick-up head of the optical disk drive to sequentially output a plurality of first test laser powers according to a plurality of first control signals (Fig. 12: steps S1, S3); and

establishing a first mapping function according to the first control signals and the first test laser powers (Fig. 12: step S5);

wherein a first predetermined laser power and a first predetermined control signal is obtained by using the first mapping function, and the first predetermined control signal is used for driving the pick-up head to output the first predetermined laser power ((for example, Fig. 8: the coarse adjustment is used later for the fine adjustment used to set the zone power levels).

Regarding claim 4:

In Masaki the first predetermined laser power is substantially an erase power used by a CD-RW drive for erasing data recorded on a recording layer of an optical disk (Fig. 12 is an erasing power adjustment process; the drive of Masaki is both a MO and CD drive: column 1, lines 1-30).

Regarding claim 5:

Masaki further comprises:

driving the pick-up head to output a plurality of second test laser powers according to a plurality of second control signals (Fig. 13: steps S1, S3);

measuring the second test laser powers (Fig. 13: steps S2, S4); and

establishing a second mapping function by using the second control signals and the second test laser powers (Fig. 13: step S5, S6).

Regarding claim 6:

In Masaki an open loop configuration is established when the pick-up head outputs the second test laser powers according to said second control signals (the APC

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is turned off for the coarse adjustment, which establishes an open loop condition: column 18, lines 45-55).

Regarding claim 7:

The method of Masaki further comprises a step of adjusting an amplifying gain adaptive to a current status of the pick-up head according to the first test powers (Fig. 12: step S5, S6; Fig. 13: the relationship between current and power is used to adjust the gain of the system when setting a target power).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eastman et al. (US 5,446,716) and Eastman et al. (US 5,436,880) both disclose laser calibration mapping functions and open and closed loops; Bakx et al. (US 2003/0048712) discloses laser calibration first in an open loop and then a closed loop; Seo (US 6,661,759) discloses laser calibration; as does Call et al. (US 5,640,381).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 8/9/06

  
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